## AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

**Listing of Claims:**

1. (Currently Amended) A system for rehabilitation of a hearing disorder, comprising:

at least one acoustic sensor, configured to sense an acoustic signal and configured to convert said acoustic signal into an electrical audio signal,

an electronic signal processing unit configured to process and amplify said electrical audio signal, said signal processing unit including,

a speech analysis and recognition module,

wherein said speech analysis and recognition module ~~are~~ is arranged to detect and extract additional prosody of the speech information, and

a speech synthesis module configured to facilitate the transmission of speech information in a noisy environment;

wherein said speech synthesis module is arranged to take into account the prosody of speech information in speech synthesis, and

an actuator arrangement configured to provide output stimulation and configured for positioning in a single external auditory passage;

said actuator arrangement comprising at least dual output stimulators, wherein

said output stimulators are at least one intracochlear electromechanical or purely electric ~~extracochlear electroacoustic, electromechanical, or purely electric~~ stimulator, and

at least an additional extracochlear electroacoustic, electromechanical, or purely electric stimulator.

2. (Previously Presented) The system of claim 1, wherein the signal processing unit comprises:

a digital signal processor having software modules for speech analysis and synthesis.

3. (Previously Presented) The system of 2, wherein the speech analysis and speech recognition module and the speech synthesis module are adaptive

4. (Previously Presented) The system of claim 2, wherein the speech analysis and speech recognition module and the speech synthesis module are re-programmable.

5. (Previously Presented) The system of claim 1, wherein the speech analysis and speech recognition module and the speech synthesis module include a digitally implemented neural network.

6. (Previously Presented) The system of claim 1, wherein the speech analysis and speech recognition module and the speech synthesis module are adapted to transmit phonetic categories between said modules.

7. (Previoulsy Presented) The system of claim 1, wherein the speech analysis and speech recognition module and the speech synthesis module are adapted to transmit lexical categories between said modules.

8. (Cancelled).

9. (Previously Presented) The system of claim 1, wherein

said arrangement is configured to detect and extract prosody of speech information is adapted for extraction of level and characteristic of fundamental speech frequency for voiced sounds, and

the arrangement configured to take into account prosody of speech information in speech synthesis is adapted to effect the corresponding modulation of the output signal.

10. (Previously Presented) The system of claim 1, wherein the speech analysis and recognition module and the speech synthesis module are adapted to be turned off to enable processing of audio signals without speech analysis and synthesis.

11. (Previously Presented) The system of claim 10, further configured to automatically turn off the speech analysis and recognition module and the speech synthesis module at a low level of interfering sound.

12. (Previously Presented) The system of claim 10, further configured to turn off the speech analysis and recognition module and the speech synthesis module by remote control.

13. (Previously Presented) The system of claim 1, wherein the signal processing unit further includes software modules adapted to enable masking of tinnitus parallel to operation of the hearing aid.

14. (Previously Presented) The system of claim 1, wherein the signal processing unit includes,

a preprocessing arrangement for at least one of pre-amplification and filtering, and

an A/D converter for analog-digital (A/D) conversion of the acoustic signals.

15. (Previously Presented) The system of claim 14, wherein the preprocessing arrangement comprises an anti-aliasing filter.

16. (Previously Presented) The system of claim 1 further comprising a plurality of acoustic sensors, wherein,

said acoustic sensors are configured to be upstream of an analog-digital converter.

17. (Previously Presented) The system of claim 1, wherein at least one digital-analog converter is connected upstream of the actuator arrangement.

18. (Previously Presented) The system of claim 1, wherein the actuator arrangement comprises a plurality of actuators, and

wherein a respective digital-analog converter is connected upstream of each actuator.

19. (Previously Presented) The system of claim 17, wherein said signal processing unit further comprises:

a digital signal processor configured to process A/D-converted acoustic sensor signals,

wherein said signals have been preprocessed by means of said preprocessing arrangement and configured to generate digital signals for tinnitus masking.

20. (Previously Presented) The system of claim 14, wherein said signal processing unit further comprises:

a digital signal processor configured to process A/D-converted acoustic sensor signals,

wherein said signals have been preprocessed by means of said preprocessing arrangement and configured to generate digital signals for tinnitus masking.

21 – 67 (Cancelled)

68. (Currently Amended) A system for rehabilitation of a hearing disorder, comprising:

at least one acoustic sensor, configured to sense an acoustic signal and configured to convert said acoustic signal into an electrical audio signal,

an electronic signal processing unit configured to process and amplify said electrical audio signal, said signal processing unit including,

a speech analysis and recognition module,

wherein said speech analysis and recognition module ~~are~~ is configured to perform at least one of speech information segmentation or recognition, and

wherein said speech analysis and recognition module ~~are~~ is arranged to detect and extract additional prosody of the speech information, and

a speech synthesis module configured to facilitate the transmission of speech information in a noisy environment,

wherein said speech synthesis module is arranged to take into account the prosody of speech information in speech synthesis, and

an actuator arrangement configured to provide output stimulation.

69. (Previously Presented) The system of claim 68, wherein said signal processor is configured to output a purely artificial speech signal.

70. (Previously Presented) The system of claim 69, wherein said signal processor is configured to effectively eliminate inputside interference portions.

71. (Currently Amended) A system for rehabilitation of a hearing disorder, comprising:

at least one acoustic sensor, configured to sense an acoustic signal and configured to convert said acoustic signal into an electrical audio signal,

an electronic signal processing unit configured to process and amplify said electrical audio signal, said signal processing unit including,

a speech analysis and recognition module, configured to facilitate the transmission of speech information in a noisy environment;

a speech synthesis module arranged to take into account the prosody of speech information in speech synthesis, and

an actuator arrangement configured to provide output stimulation and configured for positioning in a single external auditory passage;

said actuator arrangement comprising at least dual output stimulators, wherein

said output stimulators are at least one intracochlear electromechanical or purely electric ~~extracochlear electroacoustic, electromechanical, or purely electric~~ stimulator, and

at least an additional extracochlear electroacoustic, electromechanical, or purely electric stimulator.

72. (Previously Presented) The system of claim 71, wherein said additional stimulator comprises an intracochlear output stimulator.

73. (Previously Presented) The system of claim 72, wherein said additional intracochlear output stimulator comprises an electromechanical converter for excitation of the fluid-filled inner-ear spaces.

74. (Previously Presented) The system of claim 72, wherein said additional intracochlear output stimulator comprises a purely electric electrode array.

75. (Previously Presented) The system of claim 71, wherein said at least dual output stimulators comprise:

an extracochlear multichannel array of electromechanical converters for stimulation of the middle ear, and

an intracochlear electrically acting stimulation electrode array, having

at least one stimulation electrode for electrical stimulation of the inner ear.

76. (Previously Presented) The system of claim 71, wherein said extracochlear output stimulator comprises an electroacoustic stimulator.